

Description of a new *Scotophilus* from the Gambia, with remarks on some of the allied species; by OLDFIELD THOMAS, Natural History Museum, London.

In a further consignment of bats sent to the Natural History Museum from Bathurst, on the River Gambia, by my friend D.^r Percy Rendall, I find two examples, one adult and the other immature, of the following interesting new species of *Scotophilus*.

***Scotophilus albofuscus*, sp. n.**

Size small; body stout and heavy compared to the size of the wings. Head very broad and flat; muzzle considerably swollen, the glandular prominences much developed. Ears rather thick and fleshy, especially along their outer edge; laid forward they reach to just about halfway between the eye and the tip of the nose; their internal basal lobe scarcely developed at all; inner margin nearly straight, tip narrowly rounded off; outer margin evenly convex in its upper third, slightly concave in its middle third, and terminating in a long fleshy lobule running forwards towards the angle of the mouth. Tragus unusually short (see measurements below), its inner and outer edges straight and nearly parallel, tip broadly rounded off, external basal projection fairly well developed. Wings to the metatarsus. Post calcaneal lobe broad and prominent. Extreme tip of tail projecting.

Fur short and close, scarcely encroaching at all upon the membranes or limbs. Colour of body above and below dark umber brown; naked skin of all those parts which are visible when the wings are folded dark brown or black, i. e. muzzle, ears, lines of arms, forearms and fingers, wing membranes internal to a line drawn from the elbow to the knee, and whole of hind-limb, interfemoral membrane and tail; on the other hand

some of the more aberrant species of *Vesperugo*, and especially from those placed by M.^r Dobson in his subgenus *Scotozous*, to which perhaps it may be thought the new species should have been referred. *Scotozous* was founded on the Indian *V. (S.) dormeri*, Dobs., a species with all the *facies* of a *Vesperugo*, with two upper premolars, and with a long and pointed anterior lower premolar, these characters being strictly those of *Vesperugo*, from which in fact it only differs by having but one upper incisor on each side, as in *Scotophilus*. On the other hand the second species referred to the subgenus by M.^r Dobson, "*Nycticejus schlieffeni*," Peters, ought, it appears to me, to be rather called a *Scotophilus*. Before entering into this point however, some reference to its specific history is unfortunately necessary, as there has been considerable confusion in regard to it.

Its first description was given by D.^r Peters in 1859 ⁽¹⁾ unless *Vespertilio marginatus* ⁽²⁾, Cretzschm. be the same species, but the type of the latter form was distinctly stated by Blasius ⁽³⁾ to be referable to *Vesperugo kuhli*, Natt., and if he was right the species will stand under Peters's name. In 1878 ⁽⁴⁾ M.^r Dobson referred the bat, with one Museum specimen, to his subgenus *Scotozous*, of the genus *Vesperugo*, but at the same time ⁽⁵⁾, misled by an erroneous locality, he placed a second specimen of it under *Scotophilus pallidus*, a species described by him two years previously in India ⁽⁶⁾. That this specimen was wrongly named has since been proved by the receipt of genuine examples of *S. pallidus* from India, but in the mean time a comparison with it had caused the Marquis G. Doria and myself to refer ⁽⁷⁾ to *S. pallidus* a bat from Massowa collected by Signor Gustavo Frasca; this extension of the range of the latter, commented upon by us at the time, must now be cancelled, the bat being, like the

⁽¹⁾ M. B. Ak. Berl., p. 224, 1859.

⁽²⁾ Atl. Rüpp. Reise, p. 74, pl. XXIX, 1826.

⁽³⁾ Säug. Deutschl., p. 65, 1857.

⁽⁴⁾ Cat. Chir. B. M., p. 244, 1878.

⁽⁵⁾ l. c., p. 264.

⁽⁶⁾ Mon. As. Chir., p. 186, 1876.

⁽⁷⁾ Ann. Mus. Civ. Genova (2), IV, p. 206, 1886.

the wing-membrane external to the same line is pure white above and below, contrasting very markedly with the dark skin of the limbs and digits.

Number of teeth strictly as in *Scotophilus*. Upper incisors long, slender, unicuspid, close to the canines; without posterior ledges, but each with a very minute postero-external basal cusp. Lower incisors tricuspid, overlapping, placed at right angles to the direction of the jaws. Anterior lower premolar not as in *Scotophilus*, crushed in between the posterior one and the canine, but more as in *Vesperugo*, long, as long as the posterior one, and quite as large in section basally, its long simple cusp directed somewhat outwards, out of the general line of the teeth.

Measurements of the *type*, an adult male, preserved in spirit:

Head and body 50 mm.; tail 31; head, length 17, breadth of muzzle across eyes 10.8; ear, length above crown 8.8, from base of outer margin 14.5; tragus, length of inner margin 2.0, of outer margin 3.7; forearm 31 (= 1.22 in.); lower leg 12; hind-foot without claws 7.1; calcaneum 13.

Hab. Bathurst, River Gambia. Collected by D.^r Percy Rendall.

This species may be readily distinguished from all its allies by its white wings, which contrast very markedly with the dark coloured body and limbs, all the other known members of the genus having the body and wings more or less uniformly coloured. In this respect the bats of the Gambia present rather a remarkable instance of geographical isomorphism, a considerable proportion of the smaller forms, belonging to several different genera, being dark with white wings, a style of coloration comparatively rare elsewhere.

D.^r Rendall is to be congratulated on his discovery of this striking species, which forms a worthy companion to the *Vesperugo* (*Vesperus*) *rendalli* described by me last year (1).

The characters of *Scotophilus albofuscus* add still further to the difficulty of properly distinguishing the genus *Scotophilus* from

(1) Ann. Mag. N. H. (6) III, p. 362, 1889.

specimen with which it was compared, an example of *S. schlieffeni*. Finally in 1887 D.^r H. Noack, when determining ⁽¹⁾ a bat from Marungu, Central Africa, thinking (and as I believe rightly) that he had before him a true *Scotophilus*, described it as new under the name of *S. minimus*, but his detailed description leaves no doubt as to its identity with *S. schlieffeni*, with which he naturally did not compare it, owing to the latter form being referred to *Vesperugo* in D.^r Dobson's classical work.

Now this animal, round whose history so much confusion has gathered, has distinctly the general facies of *Scotophilus*; it has ordinarily no minute anterior upper premolar, and the corresponding tooth in the lower jaw is as small and almost as much crushed in between its neighbours as is the case in several of what are admittedly *Scotophili*. It is true that it has occasionally an anterior upper premolar, but this only occurs in one ⁽²⁾ of the many specimens known to science, and may be simply an individual variation, perhaps due to atavism. In fact M.^r Dobson's own reference of a specimen of it to "*Scotophilus* „ *pallidus* „ and D.^r Noack's description of it as "*Scotophilus* „ *minimus* „ as already referred to, both strongly support this view.

But even if *S. schlieffeni* is a *Scotophilus*, it by no means follows that *S. albofuscus* is, for the latter is still further away from the typical members of the genus, owing to its long and uncrowded anterior lower premolars, which agree more with those of the true *Vesperugo* or of *Scotozous dormeri*. In fact it stands in regard to the latter form just where *Vesperus* does to *Vesperugo*, *Glauconycteris* to *Chalinolobus*, and *Dasypterus* to *Atalapha*, differing, so far as dentition is concerned, only by the absence of the minute upper premolars. But whatever may be

(1) Zool. J. B. II, p. 280, 1887.

(2) I have to thank Prof. Milne Edwards for the loan of the two specimens of *S. schlieffeni* referred to on p. 244 of Dobson's Catalogue as being in the Paris Museum. In only one of these specimens however can I find the minute upper premolars present. The mouth of the other one contained a large number of grains of sand, and I suspect that D.^r Dobson, who expected to find the tooth present, as in *Scotozous dormeri*, mistook one of these grains for a tooth, a mistake that will be readily pardoned by any one who knows the difficulty of searching for these minute structures.

the ultimate arrangement of these various annectent species, it seems better for the present to call the new form a *Scotophilus* on account of its dental formula, irrespective of the shape of the teeth, rather than to consider it a member of the large genus *Vesperugo*, in which the number of its teeth would necessitate the foundation of a new subgenus for its reception.

There is another bat whose claim to generic distinction is considerably weakened, if not, as I believe, altogether removed, by the discovery of *Scotophilus albofuscus*, namely the American species called by D.^r H. Allen (1) and others “*Nycticejus crepuscularis* „. This bat’s sole, or at least chief, generic characteristic lies in the uncrushed state of its anterior lower premolars, a peculiarity which as already stated, *S. albofuscus* shares with it, while geographical considerations would prevent the two species from being regarded as specially closely related. It may also be noted that since Rafinesque’s *Nycticejus humeralis* (2) is, as D.^r Allen has suggested, no doubt identical with Le Conte’s “*N. crepuscularis* „ (3) and is earlier in date, the species ought to bear the former instead of the latter specific name (4). Its proper designation would therefore appear to be *Scotophilus humeralis*, Raf.

(1) Mon. Bats N. Amer., p. 12, 1864.

(2) Am. Month. Mag. III, p. 445, 1817; Journ. Phys. LXXXVIII, p. 417, 1819.

(3) Mc. Murtrie’s Cuv. An. K. I., p. 432, 1831 (*vide* Allen).

(4) If *N. humeralis*, being the type species of the genus *Nycticejus*, be not identical with *N. crepuscularis*, it is evident that the name *Nycticejus* could not rightly be used for the latter at all, since the genus could not have been founded on a species not discovered until twelve years after its own description.